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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,314	05/10/2001	Jean Kocur	514413-3876	5942

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EXAMINER

CLARDY, S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 08/13/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,314

Applicant(s)

Kocur et al

Examiner

S. Mark Clardy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 19, 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-35 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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New claims 18-35 are pending in this application.

Applicants' claims are drawn to methods of controlling harmful organisms by applying compositions comprising agrochemically active agents which are bonded electrostatically by hydrogen bonds (i.e., ionically) to a polymeric material for controlled release. Note that rather than indicating that the composition is applied in a controlled manner to organisms or their environment, claim 1 actually states that the organisms reside in the environment in a controlled manner. While claim 1 is clear semantically, it could be improved syntactically.

Applicants' formulation examples 1-5 (pages 21-22) make use of the herbicide iodosulfuron (optionally in combination with fenoxaprop and mefenpyr as HUSSAR®), or the herbicidal combination of fenoxaprop + ethoxysulfuron, combined with the polymeric material identified as MOWIOL® 4-88 which is described as a polyvinyl acetate (p. 5, lines 13-14).

Again, applicant elected without traverse the composition comprising iodosulfuron and polyvinyl alcohol (PVA). Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141.

Applicant is again requested to review and correct the third paragraph on page 2 which is unclear ("It is an object..."). Also, please review the new claims for minor grammatical errors such as verb and subject agreement, and singular/plural discrepancies (e.g., claim 21: "a (hetero)aryl... oxylic acids"; or claim 22: "a hydroxybenzonitriles").

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The previous rejections under 35 U.S.C. 101, and 112, 2nd paragraph, are withdrawn in response to applicant's amendment.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20, 29, 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It appears that the second line of claim 20 should be amended to read:

-- is a herbicide, [as] a plant growth regulator or a safener. --

In the last line of claim 29, the group -CIN< should be amended to read -CON< (see p. 4).

In claim 31, the punctuation is inconsistent and makes the claim difficult to interpret.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18, 19, 24, 29-31, 33, and 35 are rejected under 35 U.S.C. 102(a) and (b) as being anticipated by Hansen et al (US 5,693,411). Hansen et al teach fibers to which are bonded various particulate materials including agrochemicals such as herbicides (e.g., diquat, endothal: col 13, Table

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I, lines 22, 29), by means of a polymeric binder which has a functional group (columns 23-24) capable of hydrogen bonding (abstract). While the elected species is not taught, the disclosure reads on applicants' generic claims.

Claims 18-33 and 35 are rejected under 35 U.S.C. 102(a) and (b) as being anticipated by Hokko Chem (JP 10-273405). Hokko Chem teaches aqueous suspension formulations with high stability comprising sulfonylurea herbicides and polyvinyl alcohol. The various properties of polyvinyl alcohol, whether disclosed in Hokko Chem or not, are inherent in the chemical. In the table on page 7, various sulfonylureas (-sulfuron: -スルフロン) are combined with polyvinyl alcohol (ホ° リヒ° ニルアルコール) with average molecular weights from 300 to 2000; example 6 combines 0.3% pyrazasulfuron with 3% 500 MW polyvinyl alcohol, i.e., at a PVA:sulfonylurea rate of 1:0.1. Inasmuch as each element of the invention is taught in Hokko Chem, the controlled release feature disclosed herein would be inherent in the composition.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 18-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Hokko Chem, Varkonda et al¹, and Hoshi (US 6,211,118); Hansen et al was not used in the obviousness rejection.

Hokko Chem has been discussed above, but does not specifically teach iodosulfuron.

Varkonda et al teach that polyvinyl alcohol was known to enhance the herbicidal activity of various herbicides including atrazine, phenmedipham, glyphosate, isoproturon, and chlorotoluron (Zeazin, Betanal, Nabu, Roundup, Arelon, and Dicuran, respectively).

Hoshi teaches the combination of the disclosed herbicidal pyridazinonyl hydrocarbyl ether compound in combination with a second herbicidal agent (flucarbazone, or the sulfonylurea herbicides sulfosulfuron, iodosulfuron, or flupyrsulfuron; columns 1-2) in addition to other carriers, surfactants, and additives such as polyvinyl alcohol (col 4, lines 29-38). Formulation Example 4 (column 6) teaches the combination of one of the five disclosed compounds, with one of the above second herbicides, and an aqueous solution of 10% polyvinyl alcohol.

One of ordinary skill in the art would be motivated to combine these references because they disclose the utility of polyvinyl alcohol in herbicidal compositions.

Thus it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have combined applicants' elected iodosulfuron with polyvinyl alcohol because polyvinyl alcohol was taught in the prior art as having utility as an enhancer for herbicides,

¹Varkonda et al. CA 101:165409g. Abstract of "Potentiation of the effect of herbicides by polyvinyl alcohol", *Agrochemic (Bratislava)*, 1984.

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and has been specifically taught in combination with sulfonylurea herbicides. Further Hoshi teaches that iodosulfuron, among other sulfonylurea herbicides, may be combined with another herbicidal agent and polyvinyl alcohol. Applicants argue that the references do not teach applying the herbicidal agents to plants; it is unclear why one of even less than ordinary skill would not apply them to plants.

No unobvious or unexpected results are noted; no claim is allowed.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103c and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is (703) 308-4550.



S. Mark Clardy
Primary Examiner
AU 1616

August 8, 2003